

Translation of the original-

USER MANUAL

TRANSTRON XL



Version: GB-TN-XL-002 ■
Date: 17.03.2011 ■ AB-Nr:

Please read user manual before you start working on the machine



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Every member of the user's staff who installs, operates, maintains and repairs the unit must have read and understood this user manual before taking the unit into operation

Operation of the device as provided

This device may not be operated

- in areas with explosive hazards (customized version available),
- outside the stated protective system,
- outside of the indicated voltage
- outside the permitted temperature range.

The Conveyor is used exclusively to transport products through a metal detector in stationary operation. Conveying humans and living animals with the Conveyor is not permitted.

Operating the device in an improper way can lead to damages at the device and also to injuries or the death of persons.

Any structural change of the device may only be effected after consent and prior inspection of the manufacturer.

The data provided in the manual regarding operation, maintenance have to be observed. Works at the metal detector may only be carried out by trained and authorized personnel.

Safety



Safety during transportation:

- If the prevailing permitted weight limits for movable goods to be transported by persons are exceeded, hoisting devices are to be employed!
- Assembling the hoisting device and the following transport may only be carried out by trained and authorized personnel!
- During transportation the prevailing safety regulations are to be observed!



Safety during operation:

- It is prohibited to operate the product if the side protection covers and the cover of the pusher (if installed) are not fitted.
- Operating personnel may not have loose hanging hair or pony tails, or wear loose ribbons, hair bands, scarves, free-hanging items of clothing, rings or similar items. Sleeves may only be rolled up to the inside.
- Rotating rollers can crush fingers. Particularly dangerous areas are located between the belt and the rollers, between the belt and downstream devices, between the belt and any attached ejection unit and between the belt and the foot.
- The electronics casing box has to be closed!
- People with implanted body aids may not stand in immediate proximity of the detector!
- Training of the personnel about audio-visual warning devices and rejection systems will be absolutely necessary!

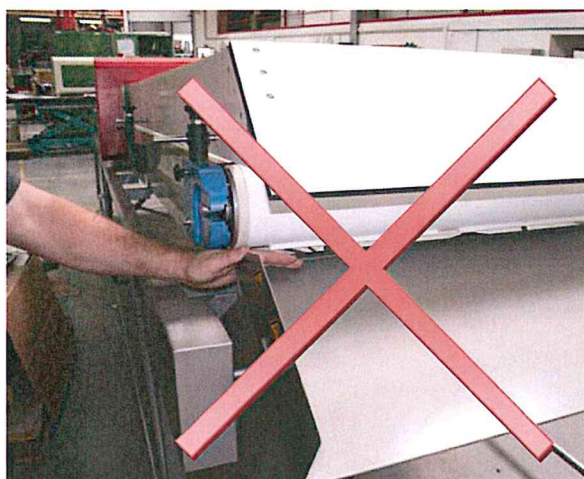
Before carrying out repair or maintenance work at the device, note the following!

- Stop the conveyor belt!
- Disconnect from mains supply!
- Disconnect the compressed air supply!
- Be careful of external voltages at the switch exits!

All components must be protected durably so that they may not be switched on!

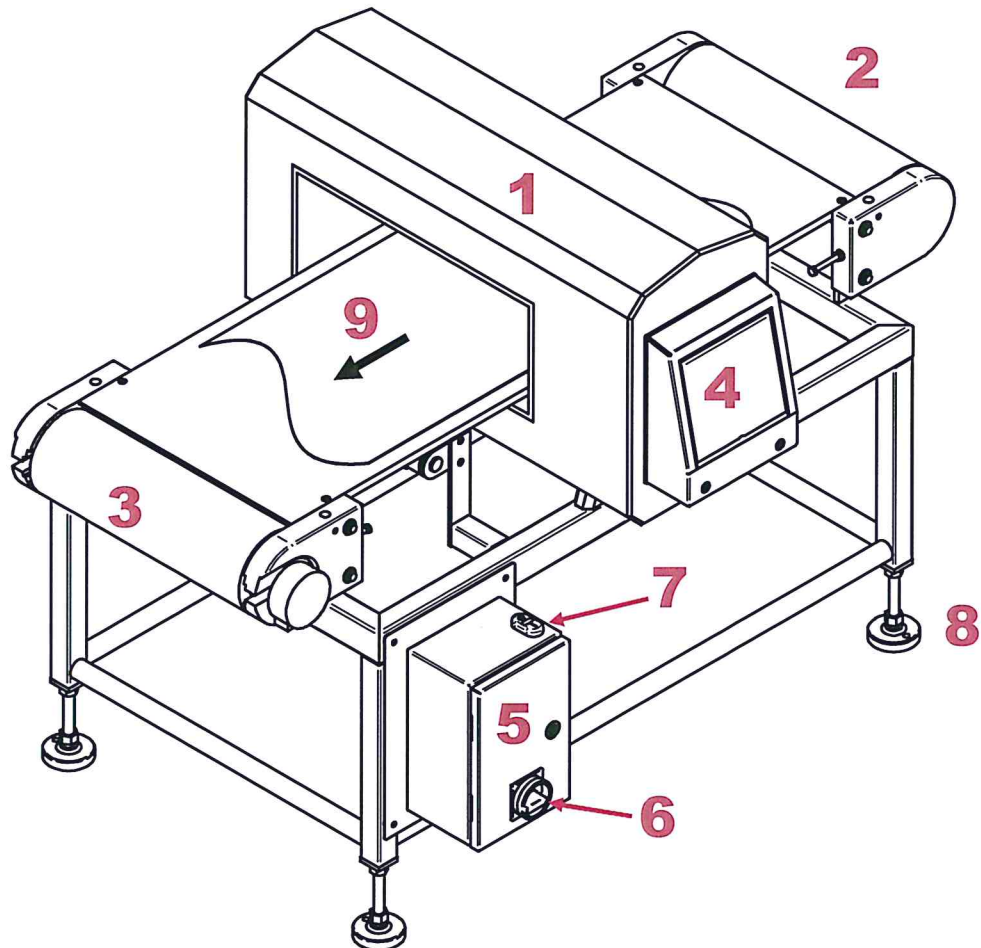
Works at the device may only be carried out by trained and authorized personnel.

Danger zones!



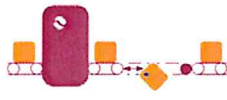
Assembly

The following sketch shows the basic set-up of a TRANSTRON XL-conveyor belt with METRON CI metal detector. Design and size can vary depending on type and way of application. However, the concept always is the same.

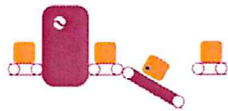


1. Metal detector
2. Deflection unit
3. Drive unit (geared motor)
4. Operating unit
5. Conveyor electrical
6. Main switch
7. ON/OFF switch
8. 4 height-adjustable stand feet
9. Conveyor direction

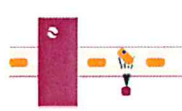
Reject systems



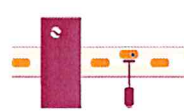
Telescopic Transfer



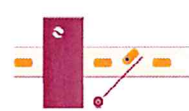
Hinged conveyor



Air blast reject



Pusher



Reject gate



NOTE:

Please observe the following when installing metal detection systems with reject systems:

- Do not operate the system without safety guards
- Please be aware that there is potential danger of pinching or other injury from the reject devices (Telescoping transfer, hinged conveyor, pusher or reject gate) and the product itself, as well as from the reject bin and moving rollers.
- There is danger of injury from being pushed by the transfer telescope, the conveyor hinge or the reject arm.
- The air blast from the air blast reject may cause injury to the eyes!

Warranty and liability

We are liable for defects in the unit manufactured by us in accordance with our terms and conditions of business. All claims are voided if damage occurs due to improper operation, repairs or interventions by persons not authorised by the manufacturer or the user, or the use of accessories and spare parts which not suitable for our unit.

Installation

The conveyor belt may only be installed on solid ground. It must be installed such that the drive and guide axles are exactly horizontal. Unevenness of the floor must be compensated by suitable measures. Mobile conveyor belts must always be secured against rolling away from their position.

Safety procedures before taking the device into operation



Before actuating the metal detector at least the following parts of the device must be checked:

- Is the device damaged anywhere?
- Are the electric ports and mains undamaged ?
- Are all protective covers fitted and free of damage?
- Are all pneumatic supplies and mains undamaged (if installed)?

The device can start if **everything is perfect**.

The following items should hereby be particularly observed.

- Running direction of the belt: The belt is always pulled by the drive roller and never pushed.
 see also arrow “conveyor direction” in chapter **Introduction → Installation**
- Tracking of the belt: If the belt doesn't run central
 see chapter **Adjustment → Belt tension and the belt run**
- Enough belt tension: For adjustment
 see chapter **Adjustment → Belt tension and the belt run**

Switching on

The main switch is implemented as a red rotary switch and is mounted on the motor protection breaker. It is used to bring the unit to an immediate standstill in the event of a dangerous situation. Switch on/off by turning.

The conveyor belt is started via the ON/OFF switch.

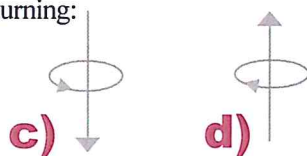
- 1.** Turn the main switch to “ON” (red rotary switch).
 - 2.** Press the green button on the conveyor controller (ON/OFF switch).
 - 3.** Conveyor belt operating.
- a)** Main switch
- b)** ON/OFF switch
Green = I = ON
Red = O = OFF



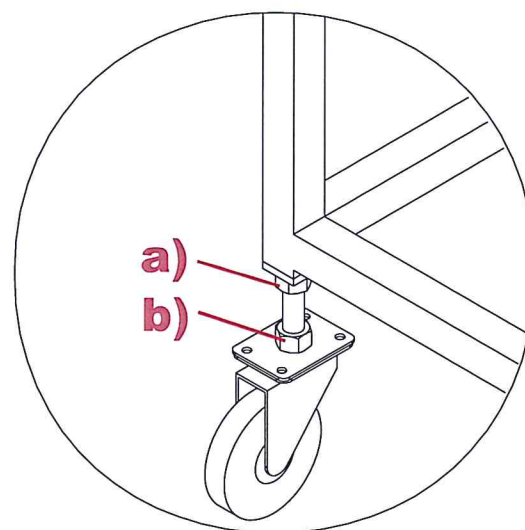
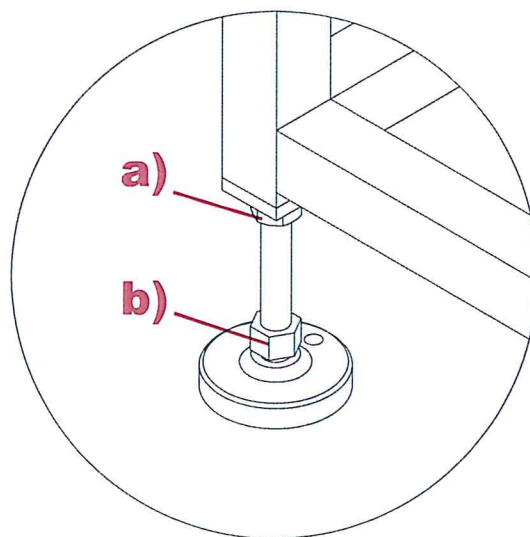
Height adjustment

1. Loosen nut **a)** by turning in direction **d)**
2. Set the working height:
Turn the nut **b)** in direction **d)** (to the left) to increase the height; turn the nut **b)** in direction **c)** (to the right) to decrease the height.
3. Tighten nut **a)** again by turning it in direction **c)**

Direction of turning:



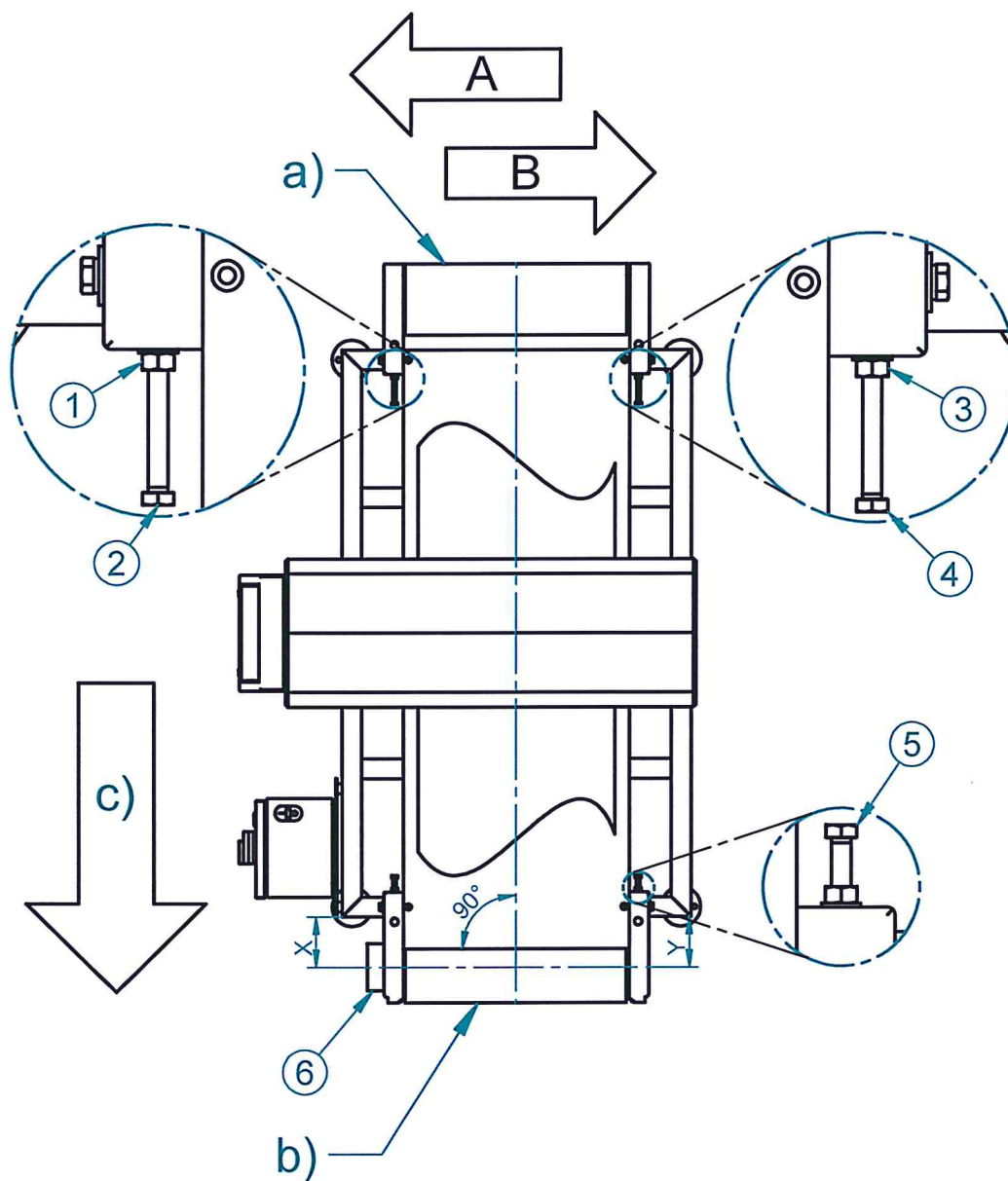
TRANSTRON with steering castors (optional)



The belt tension and the belt run have been pre-adjusted in the factory. However, they may change during transport or due to other environmental influences (temperature etc). To adjust the belt tension and the belt run, proceed as follows.

Necessary tools: 2 pieces of spanner (span of the jaw 19 mm)

- a)** Deflection unit
- b)** Drum motor
- c)** Running direction



Belt tension

The conveyor belt should only be tensioned to the point that prevents it from slipping when loaded!

1. Unscrew lock nuts **1** and **3**
2. Turn the tensioning screws **2** and **4** clockwise until the belt is tensioned sufficiently.
3. Tighten lock nuts **1** and **3** to the initial position. When tightening, ensure that the tensioning screws **2** and **4** are not moved any further – hold them tight with a tool if necessary.

Belt run

Belt runs in Direction A

1. Unscrew lock nut **1**
2. Turn the tensioning screws **2** clockwise till the belt is runs straight
3. Tighten lock nut **1** to start position

Belt runs in Direction B

1. Unscrew lock nut **3**
2. Turn the tensioning screws **4** clockwise till the belt is runs straight
3. Tighten lock nut **3** to start position

Please note:

- After adjusting the tensioning screw, a short time elapses before the belt run changes.
- The tensioning screw should only be changed in small steps.
- If the belt run is adjusted several times, there is a danger of the belt tension being set too high.
→ Relax the belt and re-tension it.



How to align the driving roll

The driving roll is already pre-aligned. Normally it is not necessary to adjust again.

It can be out of line when:

- the tensioning screw **5** was moved when belt or driving roll was exchanged
- the belt conveyor was installed in a already existing line
- the footings were screwed to the ground

When adjusting the swash plate motor, the angle of the wash plate motor axle to the conveyor direction must be checked (90°). As the basic setting, the measurements "X" and "Y" (distance of axle swash plate motor to frame) can be measured.

Alignment of the swash plate motor according to the following steps:

1. Loosen jam nut of clamping screw **5**. The clamping screw is always located opposite the drum motor terminal box **6**.
2. Turn clamping screw **5** until swash plate motor is at a right angle to conveyor axle.
3. Counter clamping screw **5**

Work on the device may only be carried out by trained and authorized personnel.

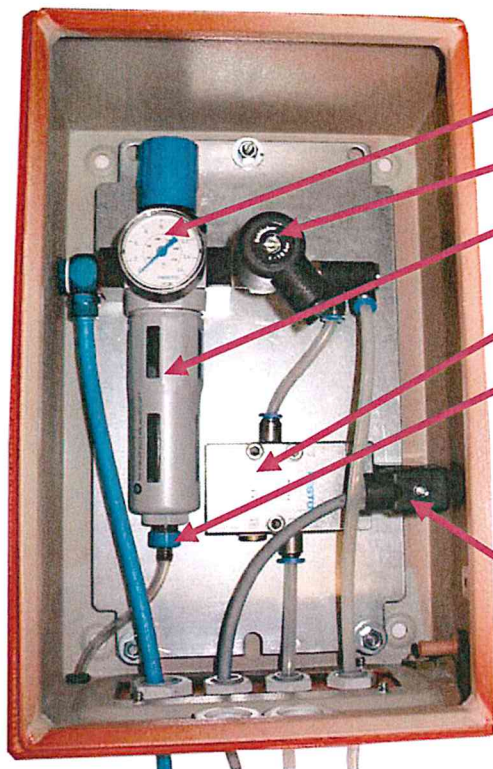
Maintenance

General

- Check at regular intervals that the mechanical fastening of your conveyor belt is tight
- Also check at regular intervals that connecting cables and all screws are tight and that they are not damaged. Re-tighten screws if necessary
- Check that the belt run is correct
- Follow the maintenance instructions for the drum motor
- If the motor is overloaded the thermal switch trips (motor is switched off).
→ It is only possible to resume operation after the motor has cooled down
- Check the adjustment of the light barriers at regular intervals (optional)

Pneumatic system (optional)

Maintenance unit



Manometer

Pressure sensor

Maintenance unit

Preset operating pressure: 5 bar

Solenoid valve

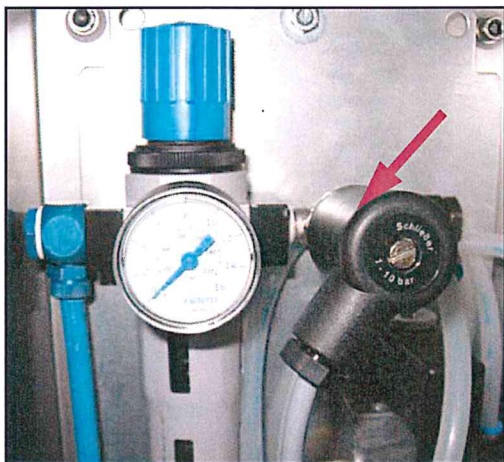
Valve for emptying the condensate tank

Emptying of the condensate tank is dispensed with, since the device is equipped with an automatic water separator.

Valve head

Check regularly that hoses and screws are tight!

Pressure sensor



The pressure sensor checks that the pressure of the connected compressed air supply is sufficient to operate your ejection device.

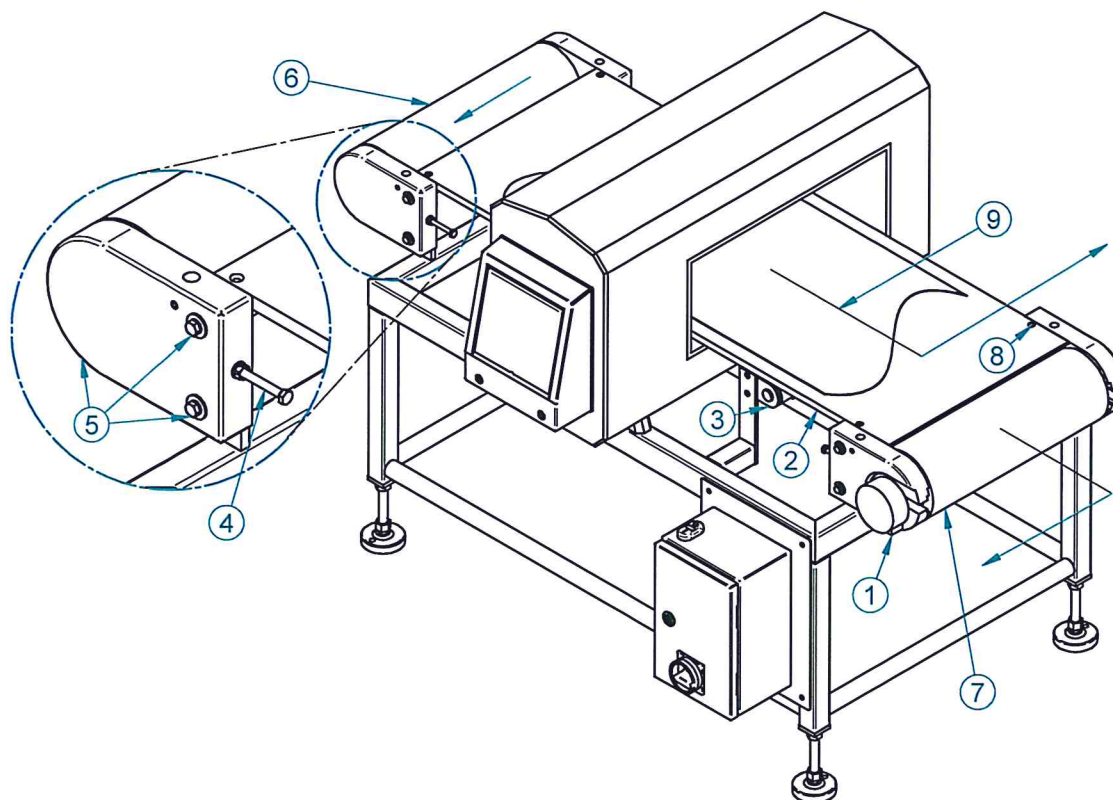
Smaller, short fluctuations in pressure that do not negatively affect the switching process will be ignored by the evaluation circuit. An external error is displayed only if the air pressure falls constantly under **3 bar**.

Preset operating pressure: 5 bar

Belt change



Before starting maintenance work, the machine must be disconnected from the electrical and pneumatic connections and secured durably against re-activation!



1. Pinch off swash plate motor
2. Unscrew lateral protective plates
3. Remove lateral slats (if applicable)
4. Slacken belt and remove tensioning screws
5. Unmount one drum bearing of the return side, remove fastening screws to this end (make sure that the screws don't fall into the pipe)
6. Pull out return pulley
7. Pull swash plate motor out of bearings and pull sideways
8. Loosen fastening screws of the spring guide plate
9. Pull belt with spring guide plate through detector and remove belt sideways

Assembly in reverse order

Cleaning

General

Before cleaning your metal detector, check the permitted protection type

see chapter **Appendix** → **Technical data**

In order to guarantee operation free of malfunctions, apart from maintenance, cleaning is also necessary in regular intervals. It is recommended to carry out maintenance and cleaning work at the same time.

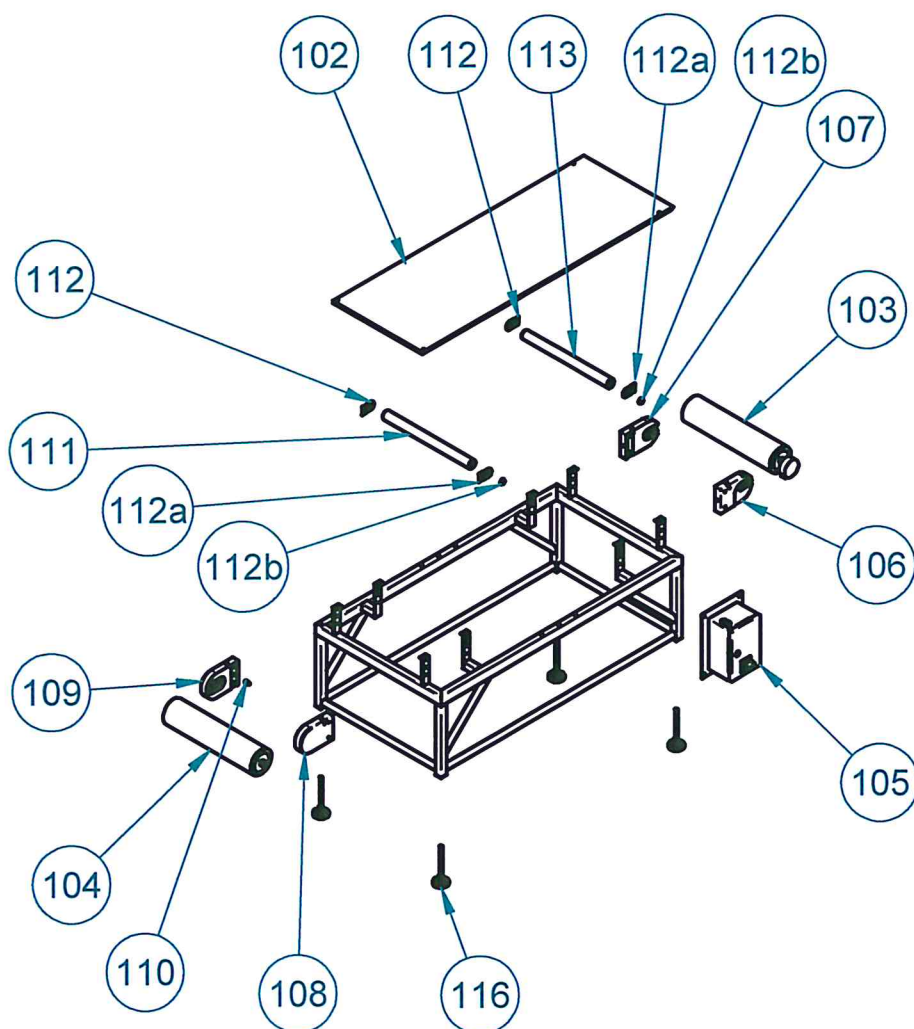
Cleaning includes removing dust and dirt from all surfaces, gaps and inside the machine. Trapped parts must be removed immediately. Operation for prolonged periods with jammed workpieces will lead to the destruction of the unit.



Please note:

- All casings must be closed.
- All covers must be fitted.
- The sensor surface must be kept free of impurities, especially metallic or conductive particles, at all times.
- None of the electronic casings and lids may be cleaned using high-pressure cleaning devices.
- Work on the machine may only be carried out by trained and authorised staff.

Drawing: TN XL – 0000 002 E Version: a



Ref.-No.	Spare part	Item.-No	Comment
101	Conveyor belt (not illustrated)	*	Wearing part
102	Glide plate	*	Wearing part
103	Drum motor TM 138	*	Wearing part
104	Guide roller UT 138	*	Wearing part
105	Belt controller,	*	
106	Belt cheek, motor end, right	350618-2	
107	Belt cheek, motor end, left	350618-1	
108	Belt cheek, guide roller end, right	350619-1	
109	Belt cheek, guide roller end, left	350619-2	
110	Earthing bolt	303023	
111	Constricting roller, PVC (please state belt width)	350617	Wearing part
112a	Holder, constricting roller insulated	260640	
112b	Insulating socket Holder	303544	
113	Constricting roller VA (please state belt width)	350620	Wearing part
114	Holder Constricting roller deflection	260467	
116	Foot	300227	
120a	Side cover (not illustrated) (Motor end Transport direction right)	*	
120b	Side cover (not illustrated) (Motor end Transport direction left)	*	
120c	Side cover (not illustrated) (Guide drum end Transport direction right)	*	
120d	Side cover (not illustrated) (Guide drum end Transport direction left)	*	

*** When spare parts are requested, please state serial number, acknowledgement number and detector type!!!**

Components and parts which are in contact with the product and which are exposed to abrasive and/or aggressive media as well as wearing parts, are excluded from the warranty!

Only original spare parts made by the manufacturer may be used.

The warranty will become null and void in the case of non-compliance!

Appendix

